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Together Towards Success

Three-year pilot summary and recommendations

برنامج "معًا للنجاح" – ملخص ثلاث سنوات من المشروع التجريبي وتوصيات للعمل

Executive Summary

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Program Overview

Overarching Rationale

- **Practical engineering studies are of great potential, which is yet unfulfilled, for quality employment and social mobility of young Arab citizens**. These tracks can offer meaningful solutions for Arab youngsters who are coming from a relatively weak education system, face various challanges when integrating into the academia, suffer from higher rates of unemployment and lower salaries and exhibit peripherality in numerous matrixes.

- In fact, **recent years have witnessed growing numbers of Arab students at practical engineering colleges under MAHAT** (the governmental arm for technological training). This integration, however, poses challenges for both students and the colleges , leading to relatively low diploma rates and low integration of Arab graduates into relevant jobs. This reality calls for the creation of new knowledge and models that could address this challenge (there are Arab-only colleges that face different, as well as similar, challenges).

- **"Together Towards Success", a three-year pilot program at Ort Braude College, offered optimal conditions to address these challenges**: an intense pilot focusing on tracks where Arab students form the overwhelming majority, substantial commitment of the college leadership, targeted philanthropic support by Beyachad and Berman foundations, ongoing professional accompaniment by Beyachad Foundation and an ongoing formative evaluation by NAS Research & Consulting.

- This Executive Summary briefly summarizes the three-year pilot and looks at its impact and conclusions.

NAS

"Together Towards Success" Rationale and Goals

- **"Together Towards Success"** was an intervention program aimed at supporting Arab students of practical engineering at Ort Baude Practical Engineering College, with the goal of increasing successful graduation and job placement rates among selected classes, as well as building a proven, replicable model for implementation in additional colleges.

- The program included several intervention components (detailed below), as well as a formative evaluation process implemented by NAS-ناس Research & Consulting Ltd. The program was jointly funded by Beyachad – the Stella and Yoel Carasso Family Foundation, the Mandell-Berman Foundation, and the Ort Colleges Network.

- **In its first year** (2020-2021), 4 classes were chosen for the program (2 software practical engineering day programs, 1 software practical engineering evening program, 1 electrical engineering program). These classes include a significant, sometimes overwhelming, majority of Arab students, and in recent years experienced academic difficulties, high dropout rates, and low diploma rates.

- **In its second and third years** (2021-2022 and 2022-2023), 4 new classes of first year students were added every year in the same study tracks.

- **Overall**, the program supported approximately 130 students in its first year, approximately 230 students in its second year, and approximately 265 students in its third year.

Strategies for Addressing Students' Barriers and Challenges

A number of barriers and challenges that rose over the course of the program's first year of operation, were found to be significant in terms of students' academic experience and their chances of success. As such, responses and solutions offered by the program were developed and modified throughout the year. The research process led to the conceptualization of four main strategies that encompass the responses developed:

Selection process
- Early selection of candidates in order to ensure that students beginning their practical engineering studies have relevant background, interest and potential for success.
- **Rationale**: enhancing access to higher education while ensuring basic academic level in the classroom that allows fruitful studying. Students who fail because of incompatibility tend to echo their frustration back into Arab community.

Individual accompaniment
- Individual accompaniment of students via mentors, second-year students and enhanced awareness of the staff. Defining compulsory attendance to ensure involvement and commitment of students (at least initially).
- **Rationale**: early individual identification of gaps as they open – rather than later when they are hard to close, preventing initial failure that undermines motivation and confidence, developing a positive plan for the future and building on the college staff commitment.

Enhancing access
- Access to information and services via enhancing linguistic and cultural access, working "hand in hand", creating multiple channels of accessibility, mentors, older students and connecting to employment opportunities.
- **Rationale**: actively addressing the weakness and passivity in utilizing available services and supports to ensure maximal utilization of college and program resources for the benefit of students – in studies and in placements. Building college-wide multi-cultural capacities.

Providing tools
- Providing life skills to students, which they can utilize for studies and the labor market.
- **Rationale**: a "wide-angle" approach towards the labor market needs, and ensuring future graduates' skills and abilities are compatible with these new developments and realities.

# Main Program Components Initial Intervention Model

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Accompaniment	**Program coordinator**	The Program Coordinator was specifically responsible for program execution and for accompanying the participants.
Selection	**Higher entry level**	In order to ensure the students' level fits studying requirements, the minimum bar in the PILAT entry exam was raised from 2 to 3.
Accompaniment	**Needs assessment questionnaire**	In order to ensure personal support and to understand cross-cutting difficulties and needs, each participant filled a "Needs Assessment Questionnaire."
Enhancing access	**Scholarships**	Due to insufficient use of scholarship eligibility by Arab students, participants received additional information regarding applications.
Providing tools	**Hebrew**	Hebrew was identified early on as a major barrier for many Arab students, and to strengthen it, the first year included a voluntary Hebrew course for interested students.
Providing tools	**Skills workshops**	Due to participants' younger age and limited experience, the program included workshops on time management, study skills, text skills etc. as well as developing of digital skills (since the first year took place mostly on Zoom due to the COVID pandemic).
Accompaniment / **Providing tools**	**Academic assistance**	Due to learning difficulties experienced in prior years, the program included study groups and extra hours of assistance.
Accompaniment / **Enhancing access**	**Formative evaluation**	The program was accompanied from day one by a formative evaluation process led by NAS Research and Consulting, to ensure ongoing learning and a reflective improvement process in real time.

Program Budget

Year	Budget	No. of Students	Comments
1st	~ USD 65,400 (ILS 242,000)	~ 130 first year students	Including voluntary Hebrew courses offered to students
2nd	~ USD 105,400 (ILS 390,000)	~ 230 first and second year students	Not including mandatory Hebrew courses provided to students in all tracks
3rd	~ USD 116,760 (ILS 432,000)	~ 265 first, second and third year students	Not including mandatory Hebrew courses in two levels, provided to students in all tracks

- The annual budget included the salary of the Program Coordinator, program services (academic support, workshops, summer courses etc.), and the formative evaluation.

- In addition to the budgets detailed above, provided by Beyachad and Berman Foundations, additional funds were allocated from the college budget for skills workshops (e.g. presentations, teamwork, digital tools and critical thinking) and for additional academic support.

- Hebrew courses and some of the second and third year summer courses were supported through MAHAT.

- Overall, between USD 365 and USD 420 were invested annually per student (excluding costs of Hebrew courses and evaluation).

- The cost of the Basic Hebrew Course (80 hrs.) was around USD 270 per student; the cost of Advanced Hebrew Course (40 hrs.) was USD 135 per student.
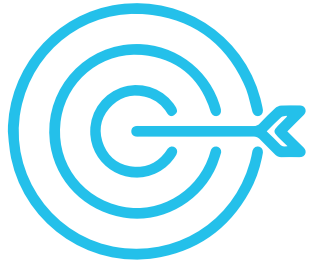
Impact

Dropout and Graduation rates **Software Engineering**
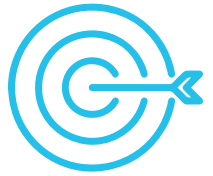
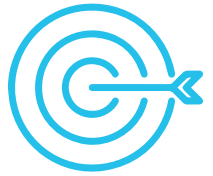| School Year	Track	% of Arab students in the class	Dropout rates, Arab students	Graduation rates, Arab students at end of standard time*
2018 (prior to program)	Day	86%	37%	34%
	Evening	71%	60%	9%
2021 (first cohort)	Day	89%	24%	49%
	Evening	66%	36%	21%**
2022 (second cohort)	Day	91%	24%	60%

Based on data provided by Ort Braude college on Dec. 28, 2023

* Graduation rate is from those who began their studies.

** Number of graduates is not final.

Analyzing this data shows the significant impact the program had, when compared with pre-program achievements, in both tracks – day and evening. Despite better achievements, gaps remain between the two tracks.

# Dropout and Graduation rates **Electrical Engineering**

School Year	Track	% of Arab students in the class	Dropout rates	Graduation rates, Arab students at end of standard time*
2018 (prior to program)	Day	57%	17%	54%
2021 (first cohort)	Day	72%	21%	75%
2022 (second cohort)	Day	82%	21%	72%

* Graduation rate is from those who began their studies.

- Upon the beginning of the program, the college's dropout policy in the Electrical Engineering Department changed, so that while in the past students who did not pass their first-year courses could continue to study, today students that do not meet the requirements do not continue to the second year.

- As a result, while the dropout rates listed above seem to grow, the overall dropout rate of students decreased.

- In addition, students from prior cohorts who had only a few requirements to graduate were invited to participate in the program's study assistance hours and summer courses, and their graduation rates also increased.

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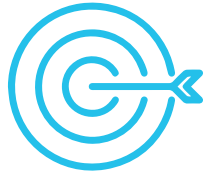
"Together Towards Success" pilot program at Ort Braude College managed to achieve significant impact in four spheres:

Concentric circle diagram labels (center to outer): Program Beneficiaries → College-wide Level → Regional Level → National Level

- A first of its kind program supporting Arab students in a technological college. Some of its components were adopted by additional colleges in the Ort Colleges Network.

- Ort Braude leadership team provided consultation to additional technological colleges interested in building models to support Arab students.

- Beyachad Foundation, MAHAT and the Ministry of Labor published a policy paper: "Arab students in MAHAT's technological colleges – information and recommendations" (Feb. 2021).

- The program's Hebrew language components were adopted and funded by MAHAT starting the 2023 school year (so far, more than USD 2.3 million were realized).

- In November 2023, MAHAT issued a call for proposals for technological colleges interested in lowering dropout rates and enhancing graduation of Arab students, in which numerous components are an adoption of "Together Towards Success" learnings (Hebrew).
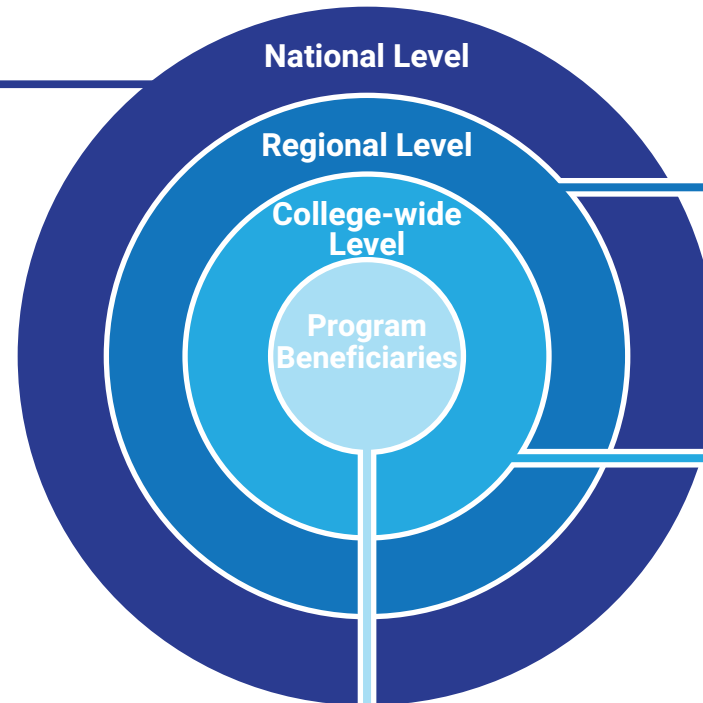
- Based on insights from the pilot's first year of implementation, a regional pre-college program was established for pupils from Arab high schools in the region.

- The program exposes selected pupils studying for 4 points math to technological education and Hebrew skills.

The program's services were widened to support all Arab students on campus, including:

- Hebrew language courses.

- An additional students' coordinator.

- Academic support and mentoring by advanced students.

- Employment preparation coordinator in collaboration with the Rayan Employment Centers.

- Spoken Arabic course for college staff.

Over the program's three-year pilot, around 400 students were supported in electrical and software engineering tracks on the academic, economic, social, and personal levels.
The program led to better achievements, less dropout and higher graduation rates among its participants.

Program Development

Based on the ongoing learning process and the formative evaluation, modifications and major changes were put into effect during program implementation. Theses developments are listed below.

Modifications to Program second year

Between the first and second year of implementation, the following modifications were made:

1 ▸ **Hiring an Arabic-speaking Program Coordinator** – ensuring smoother and more successful communication between the college and students, bridging gaps, improving access to services.

2 ▸ **Preliminary screening model** – raising the PILAT test threshold (first to a score of 3+, then to a score of 4).

3 ▸ **Hebrew** – instituting a computerized Hebrew-language evaluation test for new students, as well as a compulsory Hebrew-language course for students not meeting the predefined standard.

4 ▸ **Identifying struggling students** – using the Personal Needs Assessment Questionnaire to enable an earlier-stage and more orderly detection and evaluation process, adapting services accordingly.

5 ▸ **Proactive access to content and services** – helping students submit scholarship applications, defining paid reception hours for lecturers, institutionalizing individual meetings with Program Coordinator, all to enhance the use of supportive components by the participants.

6 ▸ **Lecturers as Mentors** – lecturers as counselors for the students, including compensation beyond classroom teaching hours.

7 ▸ **Job placement for students** – hiring a part-time, college-wide job placement coordinator, and offering practical courses for second year Software Engineering students.

8 ▸ **Summer courses** – struggling students completing their first year received expanded and improved summer courses.

9 ▸ **Regional pre-college enrichment program** – offered to Arab high school students living in localities close to the college.
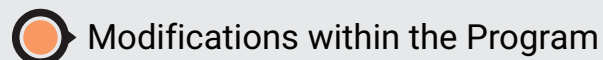
⬤▸ Modifications within the Program   ⬤▸ Modifications within the entire college and beyond

Modifications to Program third year

Based on the modifications implemented between the first and second years, and on the formative evaluation throughout the second year, the following modifications were made between the program's second and third year of implementation:

1 ▶ **Early Hebrew language selection and mandatory courses accordingly** – new college registrants were divided into three Hebrew language levels – low, intermediary and high (exempt from Hebrew courses). Those in the lowest level had to take an obligatory language course over the summer, and then continued to a full semester Hebrew course, together with students from the intermediary level. Students who didn't succeed in the course, received additional language support during the second semester.

2 ▶ **Adding preparatory summer courses towards the MAHAT exams, for all cohorts** – in addition to current students, additional students from previous years were invited to these prep courses, which contributed to their success in the exams.

3 ▶ **Improving cooperation between the Program Coordinator and the academic staff** – closer collaboration and exposing the academic staff to the program components and services, ensured staff was a better resource for the students. This led to the staff referring more students to take advantage of the program's services, thereby contributing to closer and more intense support for these students.

4 ▶ **Improving the practical software engineering courses** – following feedback from students and staff regarding the practical courses implemented during the program's second year, the courses' content, structure, timing and length were modified.

⬤▶ Modifications within the Program   ⬤▶ Modifications within the entire college and beyond

Formative Evaluation

Formative Evaluation Process

The formative evaluation process led by NAS Research and Consulting accompanied the program throughout its implementation. **The purpose of the formative evaluation was to assess the effectivity of the program in real time and support the modification and improvement process**. Following are the evaluation's major guidelines:

Ongoing accompaniment of the program

Periodic meetings throughout the year with program leadership and participation in the planning and modification processes during the program's Steering Committee meetings.

Former knowledge of the field

Amalgamating and analyzing data and trends relevant to the program from external sources, based on knowledge of macro processes in the spheres of higher education in Arab society, professional training, the job market, challenges of Arab students etc.

Feedback in real time

Ongoing accompaniment of the various program activities, discussing ideas, barriers and dilemmas that rose during implementation, thinking about solutions and enhancing their accessibility to the program participants and college staff, reexamining success and impact based on the modifications made – and so forth.

Multidimensional ongoing evaluation

Using complementary methodologies (interviews, focus groups, polls, phone surveys etc.) to conduct a multidimensional ongoing evaluation that involved participants, staff and college management.

The evaluation process led not only to a reflective improvement process within the program, but also to a wider process of reflection and institutional capacity building on the level of the college as a whole.
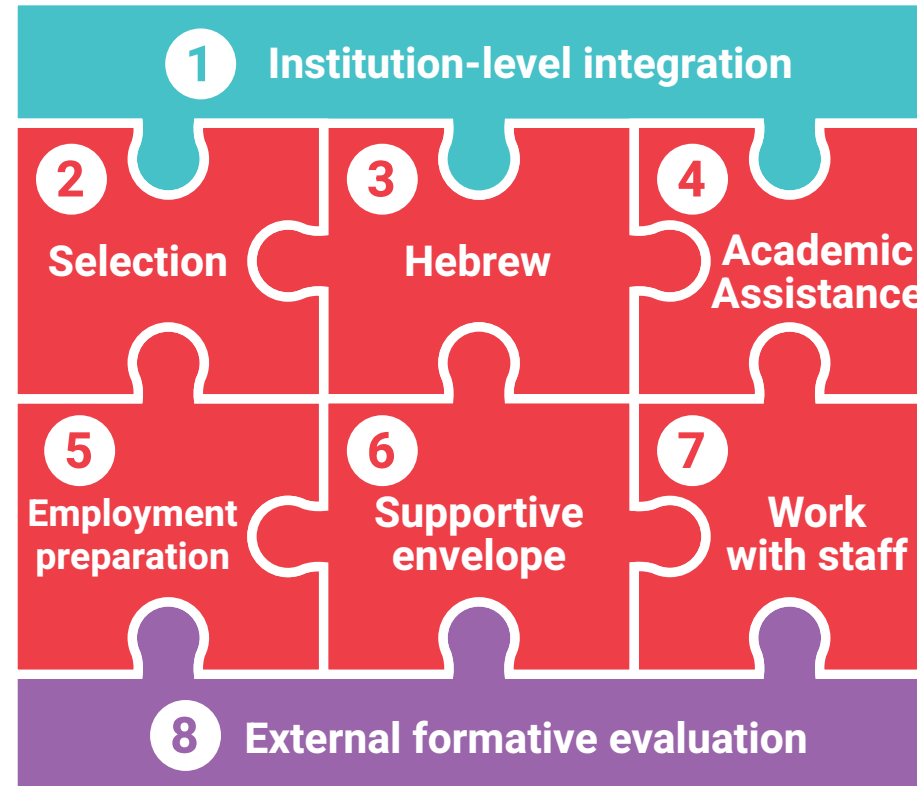
Recommendations

Operational Model, Policy Recommendations

Operational Model

- Drawing on the experience gained over three years of implementing the "Together Towards Success" pilot, and based on the findings of the formative evaluation that accompanied it, below is the suggested Operational Model for a **comprehensive program to prevent dropout and enhance successful graduation of Arab students in technological colleges**.

- The Model includes **8 major pillars** that encompass its **main contents**, and the **needed mechanisms** for its optimal operation.

Recommendations to Government (MAHAT)
Budgeting and Oversight

Budgeting

Allocating a specific budget to technological colleges for a program to lower dropout and enhance graduation rates among their Arab students: this budget should include "rigid" elements that colleges would be obligated to implement, as well as "flexible" elements that will allow each college to respond to its specific needs and challenges. The budget should include:

- **Employing a dedicated Program Coordinator** – preferably Arabic speaking – who will oversee program implementation and act as its "face" vis-à-vis students and staff.

- **Funding several levels of Hebrew courses** – since Hebrew proficiency is one of the major barriers for quality integration. A multi-phase model should be developed to identify needs and enhance Hebrew skills.

- **Academic assistance and support courses** – creating an envelope with diverse services for students.

- **Formative evaluation research** – to measure impact of program services in real time and assist in a reflective improvement process.

Recommendations to Government (MAHAT)
Budgeting and Oversight

Professional Forum

Professional learning forum – a forum of all Program Coordinators, responsible staff from all technical colleges and MAHAT representatives should be convened, as a venue for exchanging knowledge and ideas. The forum could learn from the vast experience gained during the "Together Towards Success" pilot program.

Connecting to the Labor Marker

Examine how MAHAT's Employers' Relations Unit can assist the model, to enhance opportunities for quality employment for Arab college graduates.

Institutionalize connections with local Rayan Centers, as they offer a substantial, budgeted resource, dedicated towards integrating Arab job seekers into the labor market. For example, by integrating a Rayan representative within college services.